E&MJ METAL AND MINERAL MARKETS

WEEKLY MARKET INFORMATION ISSUED BY THE PUBLISHERS OF ENGINEERING AND MINING JOURNAL

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THIS WEEK IN THE MARKETS . . .

With heavy February allocations of major nonferrous metals out of the way, the market last week relapsed into a state of comparative quiet. Hope continues that the controls on lead and zinc will be eased, but official Washington does not go along with this view. However, producers of consumer goods will get more metal before long.

GENERAL

With industrial activity holding at an unchanged rate for the last four months, consumption of nonferrous metals in the controlled market has been moving in a straight line. A more realistic approach in defense orders is in the making.

Ellis G. Arnall, former governor of Georgia, is expected to become head of the Office of Price Stabilization.

Few price changes last week. Quicksilver was unsettled.

COPPER – 24½c. Valley (export 27½c.)

Aside from continued unsettlement in the foreign "premium" market, the price situation in copper was unchanged. Though Government officials can see no improvement in the supply outlook, consumers have calmed down considerably since the beginning of the year, apparently acting on the assumption that nothing can be done about it.

Sales of copper for February delivery in the domestic market now total around 50,500 tons. The month's total is expected to approach 100,000 tons.

Chile is not moving its $1,200 per metric ton copper as freely as expected.

LEAD – 19c. N. Y. (f.a.s. Gulf 19c. to 19¼c.)

Producers believe that state of balance is approaching in lead. With Government ready to acquire metal for its stockpile, no indications of lower prices here. Imports increasing, scrap moving freely and domestic production expanding moderately largely because of resumption of work at Herculaneum smelter. St. Joe expects to get back to normal production this month.

Sales of lead in domestic market for the week totaled 7,559 tons.

Interest centered in the lead duty scheduled to come off on a temporary basis as soon as the House passes on Senate's amendments. No objections likely.

ZINC – 19½c. St. Louis (foreign 22c. and up)

Amended measure to suspend the zinc tariff in hands of House and early approval certain.

Charles E. Wilson, head of defense, announced that 29,000 tons of zinc will be made available to industry by relieving smelters from stockpile obligations. The total will consist of 14,000 tons of slab zinc scheduled for the stockpile in the first half of 1952, and the withdrawal of sufficient zinc concentrate from its reserve (stockpile) to provide 15,000 tons of metal. It is uncertain whether industry will require much of this tonnage. Market not as tight as a month or two ago.

Mexican common zinc quotable at 22c. to 23c., f.a.s. Gulf ports.

TIN – $1.21½, N. Y.

RFC sales of tin to domestic consumers for last week totaled 2,735 long tons, against 54 tons in the preceding week. Allocations for February accounted for the rise in volume.

British expect to ship 5,000 tons of Malayan tin each quarter to this country under the recent 20,000-ton deal. Negotiations have started to obtain Indonesian tin. To maintain domestic use of tin the Government is expected to release stockpile metal.

London was higher.

QUICKSILVER – $203-$206, N. Y.

Competition for business was keen and the price situation unsettled, particularly where nearby quicksilver was concerned. On metal for immediate delivery most sellers continued to quote $203 to $206 per flask of 76 lb. Domestic production is increasing, resulting in somewhat freer offerings from the mines.

SILVER – 88c., N. Y. (London 77d.)

Demand for silver for industrial purposes has increased. The price situation was unchanged, with the undertone steady. Unless metal from outside sources should come into the market the demand and supply appear to be in balance.

ANNOUNCEMENT

This issue of *E&MJ Metal and Mineral Markets* comes to you in a new format. "*Markets*" in the future will bring you every week all the information it has heretofore carried. In addition, there will be some new features. Our aim is to bring you more interpretative material as well as authoritative price data.

For the first of the new regular features, "Looking Ahead in the Markets," see p. 7.

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E&MJ METAL AND MINERAL MARKETS

WEEKLY MARKET INFORMATION ISSUED BY THE PUBLISHERS OF ENGINEERING AND MINING JOURNAL

ALFRED M. STAEHLE.....*Publisher* H. H. WANDERS.....*Editor*

R. H. RAMSEY.....*Editorial Director* R. W. DAVIS.....*Sales Manager*

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How Permanent are Metal Shortages?

The planned expansion of the copper industry is in line with the planned expansion of steel capacity and the present copper shortage may end much sooner than Government officials are predicting, Simon D. Strauss, vice president and sales manager of the American Smelting & Refining Co., declared at a meeting of the Colorado Mining Association on Feb. 1.

"There is a copper shortage at present," Mr. Strauss, said, "but the shortage will not be permanent. Any consumer who is stampeded into planning a permanent switch from copper to some other material, inferior to copper for the specific use involved, will eventually regret his decision.

"Two months ago zinc and lead were short too. In September, for instance, the National Production Authority had requests from consumers for over 120,000 tons of lead and had a supply subject to allocation of 30,000 tons. In October and November the situation was the same. By December the picture was so bad that it was decided to take some lead out of the military stockpile – 30,000 tons, which represented the quantity of lead lost through mine and smelter strikes during the fall months.

"Although domestic mine production of lead was somewhat lower in 1951 than in 1950 because of an insufficient supply of miners in some areas, the principal drop in United States supplies had been the result of reduced imports. Foreign lead was attracted to markets outside this country by the higher prices being paid there. However, this premium price has gradually disappeared – mine production of lead abroad is increasing, notably in Africa; stocks in foreign consumers' hands are fairly large; and exchange difficulties have made it harder for foreign consumers to secure dollars with which to buy Western Hemisphere lead.

"Consequently, imports of lead into the United States in 1952 probably will be larger than they were in 1951. Consumers in this country, therefore, now feel more confident of securing the supplies they require. The talk of a shortage is diminishing and will perhaps completely disappear. Of course, real requirements were never four times the supply – they only seemed that way. When people cannot get all they want, they usually ask for more than they really need in order to get the largest share possible of the restricted supply.

"In zinc the picture has been quite similar. Until a few weeks ago every user was asking for more zinc than he could get. Here too, the foreign price has declined substantially in the last months – although it is still above parity with the U. S. ceiling of 19½c a pound at East St. Louis. Foreign mine production is increasing and is well in excess of foreign smelting capacity. Therefore, United States zinc smelters should receive enough foreign concentrates in 1952 to run at or close to capacity, which is about 300,000 tons of metal a year more than domestic mines are producing.

"An added factor in the zinc position is a drop in U. S. demand caused by the civilian cutbacks. With fewer cars being made less zinc will be used in die-casting; with less brass available for civilian use, less zinc may be needed by brass makers, unless military requirements increase substantially.

Could Happen to Copper

"What has happened in lead and in zinc could happen in copper and just as suddenly. This is not a prediction that it will happen. Far from it. Balancing all the factors in the copper situation – and there are many – it seems probable that copper will continue to be tight for some months. But this is quite different from saying, as has been said, that copper will be permanently short or even that there will be 'no help in the copper shortage situation until at least 1954.'

"Of course, in drawing its plans for military production, the government must make an estimate of the probable supply of all essential materials. The copper industry can have no quarrel with such an estimate, if made honestly and intelligently. It does, however, have a quarrel with flat unqualified official predictions of permanent or prolonged shortages that are used in an effort to wean our customers away. Experience over the years has clearly shown that demand for copper is highly cyclical and that surplus periodically follows shortage just as dusk follows dawn.

"Factors that may tend to ease, if not correct, the copper situation well before 1954, are:

1. – Possible exchange difficulties that will make it hard for foreign consumers to buy copper in dollars.

2. – A somewhat freer movement of scrap.

3. – An increase in production from existing mine operations.

4. – New copper projects. There are at least four substantial additions to copper production capacity scheduled to come into operation during 1952 – the Greater Butte project in Montana; the Chile Copper sulphide project in Chile; the additions to the N'Changa capacity in Rhodesia; and the new Mount Isa copper smelter in Australia.

5. – The possibility that our own copper requirements have been overstated.

6. – Fear of a shortage itself tends to create shortage.

Mine Output Rising

"Projects for the expansion of copper production now under way will add at least 450,000 tons a year to mine output available to the Western democracies by the end of 1955. This figure takes into account the probable depletion of some mines and excludes certain major projects which will not be completed until after 1955. It also assumes that the price of copper maintains its present relationship to the prices of other commodities and the cost of production. If prices fall, production will fall also. But falling prices are hardly to be expected in times of shortage.

"Now 450,000 tons represents an expansion of 17% in four years. Of that 450,000 tons, moreover, I calculate that 200,000 tons, net, will be in the United States. And 200,000 tons is over 20% of domestic mine capacity.

"People have become so used to enormous expansion of industry that 20% growth over four years for domestic copper mining may not seem very high. Actually, however, this is as large an addition to capacity as the copper industry has undertaken in any four-year period since the age of electricity arrived.

"The need for copper goes hand in glove with the need for steel and with the general rate of industrial production. The capacity of the steel industry is being expanded by about 15%. The projected increase in copper supply will more than maintain the normal relationship between these two metals. A 20% increase in total industrial production over a four-year period, considering that the increase would be beyond the record-breaking level of output now in effect, is a major step forward. Even though individual industries may do much more, one is entitled to doubt that the nation's economy as a whole can be expanded so quickly."

Miscellaneous Metals

Quotations cover wholesale lots, f.o.b. New York, unless otherwise specified.

ALUMINUM—Per lb., base price, f.o.b. shipping point: 30 lb. ingot, 99% plus, 19c., in pigs, 18c.

Base prices on aluminum ingot of higher purity: 99.75%, 19½c.; 99.8%, 20c.; 99.85%, 21c.; 99.9%, 22c.

ANTIMONY—Per lb., 99½% grade:

	Domestic Boxed (a) New York	Domestic Bulk (b) Laredo
Jan. 31	53.350	50.000
Feb. 1	53.350	50.000
Feb. 2	53.350	50.000
Feb. 4	53.350	50.000
Feb. 5	53.350	50.000
Feb. 6	53.350	50.000

(a) Boxed (224 lb.), 10,000 lb. or more but less than carload. (b) In bulk, carload, f.o.b. Laredo; boxed one-half cent extra.

BISMUTH—Per lb., in ton lots, $2.25.

CADMIUM—Per lb., delivered.

	Commercial Sticks	Special (a) Shapes
Jan. 31	$2.55	$2.80
Feb. 1	2.55	2.80
Feb. 2	2.55	2.80
Feb. 4	2.55	2.80
Feb. 5	2.55	2.80
Feb. 6	2.55	2.80

(a) Special shapes to platers

CALCIUM—Per lb., in ton lots, cast in slabs and small pieces, $2.05.

CHROMIUM—Per lb., 97 percent grade, spot, $1.12; contract $1.07 per lb. (Usually sold as chrome-metal.)

COBALT—Per lb., rondelles or granules, in 500 to 600 lb. containers, $2.40; in 100 lb. containers, $2.42; less than 100 lb. containers, $2.47. Prices f.o.b. N. Y. or Niagara Falls, freight collect.

COLUMBIUM—No quotation. Pricing under prevailing conditions "subject to special terms."

GERMANIUM—Per lb. $180.

INDIUM—Per oz. troy, 99.9 percent pure, $2.25.

LITHIUM—Per lb. 98%, $9.85@$11, depending on quantity.

MAGNESIUM—Per lb., f.o.b. producer's plant, ingots (4x6 in.), 99.8 percent, carload lots, 24½c.; 100 lb. or more, l.c.l., 26½c. Extruded sticks, carload lots, 32½c.; 100 lb. or more, l.c.l, 34½c.

MANGANESE—Per lb. Minimum 96 percent Mn, maximum 2 percent iron, carload lots, bulk, 29c.; packed in cases, 35½c.

Electrolytic manganese 99.9 percent Mn, 28c., carload lots.

MOLYBDENUM—Per lb., 99 percent $3.00.

NICKEL—Per lb., electrolytic cathodes, f.o.b. Port Colborne, Ont., contract price, 56½c. U.S. import duty included. Nickel oxide sinter, 52½c. per lb. of nickel content, f.o.b. Copper Cliff.

OSMIUM—Per oz., $200, nominal.

PALLADIUM—Per oz. troy, $24.

PLATINUM—Per oz. troy, $90 on wholesale lots; $93 on sales to consumers.

QUICKSILVER—Per flask of 76 lb., $203@$206.

RADIUM—Per mg. radium content, $20@$25, as to quantity.

RHODIUM—Per oz. troy, $125.

RUTHENIUM—Per oz. troy, $90@$93.

SELENIUM—Per lb. $3.00@$3.50 for black, powdered, 99.5 percent pure.

SILICON—Per lb., minimum, 97 percent Si, maximum 1 percent Fe, crushed, carload lots, in bulk, 20c.

SODIUM—Per lb., carload lots, in drums, 16½c.; less than carload lots, 17c.

TANTALUM—Per kilo, base price, $160.60 for rod; sheet, $143. Discounts on volume business.

TELLURIUM—Per lb., $1.75.

THALLIUM—Per lb., $12.50.

TITANIUM—Per lb., 96@98%, $5.

TUNGSTEN—Per lb., 98.8 percent minimum 1,000 lb. lots, $6.00 Hydrogen reduced tungsten, 99.9 percent plus $7.75. Ceiling prices effective May 7.

ZIRCONIUM—Per lb., powder, $7 to $8, according to quantity.

Metallic Ores

Prices in tons of 2,000 lbs., or "units" of 20 lb., unless otherwise stated.

ANTIMONY ORE—Per unit of antimony contained, 50 to 55 percent, $5.00@$5.25; 58 to 60 percent $5.25@$5.50; 60 to 65 percent, $6.50@$6.75.

BERYLLIUM ORE—Per unit of BeO contained 10 to 12% f.o.b. mine, Colorado, nominal. North Carolina, $34@$37.

Imported ore, basis 10% BeO, $36.50 per unit, c.i.f. U.S. ports.

CHROME ORE—Per long ton, dry basis, subject to penalties if guarantees are not met, f.o.b. cars New York, Philadelphia, Baltimore, etc.

Indian and Rhodesian:
- 48% Cr_2O_3, 3 to 1 ratio lump ..... $43.00@$45.00
- 48% Cr_2O_3, 2.8 to 1 ratio ..... $40.00@$42.00
- 48% Cr_2O_3, no ratio ..... $31.00@$32.00

South African (Transvaal):
- 48% Cr_2O_3, no ratio ..... $34.00@$35.00
- 44% Cr_2O_3, no ratio ..... $27.00@$28.00

Turkish:
- 48% Cr_2O_3, 3 to 1 ratio, lump ..... $54@$55

Brazilian:
- 44% Cr_2O_3, 2.5 to 1 ratio, lump ..... (a)$32.00

(a) Nominal.

COBALT ORE—Per lb. of cobalt contained, $1.35@$1.45, f.o.b. Cobalt, Ont., depending on grade.

IRON ORE—Per long ton, Lower Lake ports. Lake Superior ore:

Mesabi non-bessemer, 51½ percent iron, $8.30. Old Range, non-bessemer, $8.55.

Mesabi, bessemer, 51½ percent iron, $8.45. Old Range, bessemer, $8.70.

Eastern ores, cents per long ton unit, delivered at furnaces: Foundry and basic, 56@62%, 17c.

Swedish, 60@68% (contracts), per unit, 15c. plus, depending on grade, c.i.f. Atlantic ports; nearby business 17c. plus.

Brazilian, 68 to 69% per unit, 26c., c.i.f. Atlantic ports. Nominal.

MANGANESE ORE—Buying interest centered chiefly in ore afloat on which prices were firm. On forward business the outlook was uncertain. Indian ore was unchanged at $1.20 to $1.25 per long ton unit of Mn, c.i.f. U.S. ports, duty extra, basis 46 to 48% Mn, nearby positions.

On long-term contracts for ore from various sources the quotations are nominal at 90 to 95c., c.i.f. duty extra.

Chemical grades, per ton, coarse or fine, minimum 80 percent MnO_2, Brazilian or Cuban, carloads, in barrels. $65@$70. Javan or Caucasian, 85 percent minimum, $75@$80. Domestic 70 to 72 percent, $45@$50, f.o.b. mines.

MOLYBDENUM ORE—Per lb. of contained MoS_2, 90% concentrate, 60c., f.o.b. mines.

TANTALUM ORE—Per lb. Ta_2O_5, $2.00@$2.25 for 56@60% concentrate.

TITANIUM ORE—Per gross ton, ilmenite, 56 to 59 percent TiO_2, f.o.b. Atlantic seaboard, $16@$18, nominal.

Rutile, per lb., minimum 94% concentrate, 4@5c., nominal.

TUNGSTEN ORE—Per short ton unit of WO_3, domestic concentrates of known good analysis, basis 60%: Ceiling price established at $65, effective April 6.

Western high grade scheelite concentrate, $65, per unit, f.o.b. mine.

North Carolina high grade concentrate, $65 per unit, f.o.b. mine.

London quotes 485s. per long ton unit or WO_3, c.i.f. U.K. ports.

VANADIUM ORE—Per lb. V_2O_5 contained, domestic, 31c., f.o.b. mine.

ZIRCON ORE (sand)—Per long ton, c.i.f. Atlantic seaboard, minimum 65 percent ZrO_2, $47@$50.

Alloys

BERYLLIUM-COPPER—Master alloy, 4 percent beryllium, remainder copper, 5 lb. ingot, $1.56 per pound of alloy; 3 oz. ingot, $2.09.

FERROCHROMIUM—Per lb. of Cr: High carbon (4 to 9%C) 65 to 69% Cr, lump, carloads, delivered Eastern zone, 21½c.; low carbon, 30½c.

FERROCOLUMBIUM—Per lb. of Cb contained, 50@55 percent, $4.90.

FERROMANGANESE—Per gross ton, 78@82 percent, $185, seaboard.

FERROMOLYBDENUM, Etc.—Per lb. of Mo contained, f.o.b., shipping point: Ferromolybdenum, 55@65 percent Mo $1.32; calcium molybdate (CaO MoO_3), $1.15; molybdic trioxide (MoO_3), bagged, $1.13, canned, $1.14.

FERROPHOSPHORUS—Per gross ton, 18 percent P, $58.50; electrolytic, 24 percent, $75, f.o.b. Alabama and Tennessee.

FERROSILICON—Per lb. of contained Si, Eastern zone: 50% grade, 12.40c.; 75% grade, 15.60c.

(Continued on page 6)

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Metallic Ores

(Continued from page 4)

FERROTITANIUM — Per lb. of Ti contained, 20 to 25% max. 0.10% carbon, $1.40.

FERROTUNGSTEN — Per lb. of W contained, $75@80 percent W, $5.00.

FERROVANADIUM — Per lb. of V contained: Open hearth, $3.00; crucible, $3.10; low-carbon and silicon, $3.20. Contract prices.

SILICOMANGANESE — Per lb. carload lots, f.o.b. shipping point, freight allowed, maximum 1½% carbon, 9.9c.

SPIEGELEISEN—Per gross ton, 19 to 21 percent grade, $75, Palmerton, Pa.

ZIRCONIUM ALLOY — 12 to 15 percent Zr, 39 to 43 percent Si, 7c per lb., bulk, carload lots; 35 to 40 percent Zr, 47 to 52 percent Si 20.25c. per lb.

Rolled Metals, Etc.

BRASS—Cents per lb. (base prices)

	Sheet	Wire	Rods
Yellow Brass	38.28	38.57	a 32.63
Best quality brass	39.15	39.44	38.84
Red brass 80%	39.67	39.44	38.84
Red brass 85%	40.14	39.88	39.28
Com'l bronze	41.13	40.84	40.24
Gilding metal	41.63	41.28	40.68

(a) Free cutting

CADMIUM — Per lb. Special shapes, to platers, $2.80.

COPPER — Per lb. Sheets, over 20 in. wide, 41.63c., rolls 20 in. and under, 39.71c.; Wire, bare, carload lots, f.o.b. mills 28.67@30.42c.

LEAD SHEETS — Per lb., full rolled, 140 sq. ft. 24c.

MONEL METAL — Per lb. (base prices) Standard cold-rolled sheet, 60½c.; cold-rolled strip, 63½c. Rods, hot-rolled 58½c.

NICKEL — Per lb. (base prices sheets, cold-rolled, 77c.; rods, hot-rolled, 73c.

NICKEL SILVER — Per lb., sheets, 10 percent, 49.27c.; 18 percent, 51.91c.; wire and rods, 10 percent, 51.49c.; 15 percent 54.79c.; 18 percent 57.91c.

PHOSPHOR BRONZE—Per lb., sheets, 5 percent tin, 60.20c.; wire and rods, 5 percent 60.45c.; 10 percent 67.33c.

ZINC — Per lb., carload lots, f.o.b. mill (base price): Sheet 26½c.; ribbon 25c.; plates 25½@26½., depending on size.

ZINC DIE-CASTING ALLOY—Per lb., carload lots, delivered, 23.65c. to 24.15c., is No. 3 "Zamac" grade.

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Rhokana's Cobalt Production

In the fiscal year ended June 30, 1951, Rhokana Corp., operating in Northern Rhodesia, produced 1,978 tons of cobalt alloy containing 747 tons of cobalt. This compares with 1,954 tons of alloy containing 739 tons of cobalt produced in the previous year. Production of electrolytic cobalt will commence early in 1952 on completion of the refinery.

Calls for Decontrol of Lead and Zinc

Price controls on both lead and zinc should be dropped because these metals are world commodities and it is futile to regulate such commodities under prevailing international conditions, in the opinion of Felix E. Wormser, vice president of St. Joseph Lead Co. The metal shortages, he declared, are simply the result of government price fixing.

Speaking at the recent meeting of the Colorado Mining Association, he warned those present that international control by the International Materials Conference will have a direct bearing on our standard of living. In commenting on the trend toward international control, he said, in part:

"The Conference has headquarters in Washington under the auspices of the State Department and includes representatives of most of the governments outside the Russian orbit. The I.M.C. functions through committees, each one specializing in one or more metals. They have acted in both copper and zinc by recommending certain worldwide allocations. Lead is under study but no recommendations have been made.

"Entitlement for Consumption"

"The I.M.C. has introduced a new conception in economic literature such as the unique expression, 'Entitlement for Consumption.' Think that one over for a moment. It means that countries, like our own, with exportable surpluses of certain commodities are given quotas of consumption, to which they are expected to adhere. For example, although we are the most important sulphur and molybdenum producers in the world, we are told how much sulphur and molybdenum we should use. At the same time it is noteworthy that tin and natural rubber, which we do not produce in this country, are not included in the scope of the Conference. I have not been able to understand why this 'Entitlement for Consumption' does not extend to foodstuffs. Perhaps it does.

"What I am trying to imply is that the International Materials Conference movement has a direct bearing on our standard of living, for, if carried on for a number of years, it will obviously tend to lower our standard, while increasing that of other countries. Our own government has traditionally been opposed to monopolies and cartels, but here, already functioning is a super cartel, and if you think it confines itself only to an exchange of observations, crystallized in the form of recommended international allocations, you will be disillusioned when you learn that it actually tries to fix some prices, as it has done, in establishing maximum and minimum prices for tungsten.

Price Fixing Next

"Although you may feel, perhaps, that the International Materials Conference is primarily concerned with the proper allocation of the available supply of the world's minerals, upon examination it apparently intends to spread far afield — economically speaking. Listen to this official statement of the Conference which reads: 'Although most of the Committees have not dealt with problems of prices, it is likely that the consideration of methods of increasing production and distributing of available supplies will require that they give attention to such problems.'

Use Control by I.M.C.

"And if you think that is all the I.M.C. is planning to do, you will be further disillusioned. Another egg is to be hatched. A statement released a short time ago on copper and zinc reads as follows: 'So that the current supplies of copper and zinc may be used to the best advantage, the Committee has recommended that countries adopt measures to eliminate unessential consumption and to encourage substitution by materials not in short supply.' So here we have a super-duper inter-governmental curb, with little sanction in law so far as I can find out, but, like the nose of the camel under the tent, is entering the metal picture gradually, first through international allocation, then proposing international attention to increasing production and distribution, and finally international conservation.

"Strip the movement of its high sounding phrases and it reveals an effort to circumscribe our standard of living. This is not a drive against inflation, as we were led to believe when the ceiling price of lead was set. This is not an effort to make certain that the United States and the rest of the world receive enough metals for defense. This movement is definitely tied into civilian economies. This is a Socialist sponsored move that has received high praise abroad, and will take over completely the functions of a free market — if we permit it — which has heretofore determined who gets what and how much.

Unnecessary Problems

"In the long run, however, in endeavoring to control world commodities, our government is trying to do something beyond its power. No matter how worthy the motive, its effort will only create more problems and a greater and unnecessary bureaucracy. I agree with Senator O'Mahoney who, in speaking about wool recently, contended that the OPS should not control U.S. wool prices, because it cannot fix foreign wool prices. He is reported to have stated, 'Both the supply and the price of this international commodity are dependent upon factors in the world market that are beyond our control.' Senator O'Mahoney might just as well have substituted the word 'lead' for wool, for the principle is applicable to both."

LOOKING AHEAD IN THE MARKETS

WHEN U.S. INDUSTRY SPENDS freely for new plant and equipment, it means an assured market for metal and mineral producers. U.S. industry plans to spend more for that purpose in 1952 than ever before in history.

THAT'S THE ESSENCE of the fifth annual survey of industry's plans for capital expenditures, made by McGraw-Hill's Department of Economics. The survey shows that U.S. industry plans to spend about $21.2-billion in 1952. In following years, spending will decline, but will still hold levels well above pre-Korean marks.

NONFERROUS METAL companies, mining and fabricating, plan to spend 62% more in 1952 than they did in 1951. The average for industry generally is a 13% increase. For details of the survey, write the editor, *E&MJ Metal & Mineral Markets*.

BUT DON'T FORGET that industry's expenditures are in turn conditioned by the ultimate consumer's expenditures, meaning you and me. Right now there are signs of a lag in our eagerness to buy. It's more noticeable in soft goods, but unless military spending picks up the slack, there may be some falling off in demand for some metals by the end of the year.

IF DEMAND DOES EASE, it will come at a time when military "chew-up" of metals has passed its peak and more metal is ready for civilian consumers. It looks as if the low point of civilian supply of metal is at hand; and an up-turn is in sight.

MILITARY EXPENDITURES can upset every prediction. For example, note the return of 35-million lb. of aluminum for the second quarter of 1952, made possible by "re-scheduling" of aircraft production. Quick obsolescence of "frozen" military designs means revamping production schedules and material supply programs. Watch Clay Bedford, Pentagon production czar. He's driving for a machine-tool stockpile that would be held ready for all-out war production only. Barring such dire need, future armament production would be limited largely to design and testing, thus eliminating the headaches and waste of rescheduling.

WE'LL BE IMPORTING NICKEL at the rate of about 121,600 tons by 1954, about 30,000 tons over the present rate. DPA's goal for 1954 is a total supply of 132,000 tons. Excess over imports will come from scrap, and from a few burgeoning domestic primary sources.

LEAD SUPPLY FOR MARCH will come to a little over 100,000 tons. Refined lead will total about 46,000 tons; imports will add about 17,000 tons; scrap will account for 40,000 tons. Not more than 9,000 tons of March lead will go right into defense plants.

EASING OF SUPPLY SITUATION in lead in recent weeks doesn't mean a weaker market. The stockpile will take up any slack. Unless stockpile policy changes, and there's no sign that it will, the Government hoard will act as a market stabilizer for some time to come.

COPPER MAY BE EASIER than you think. Washington still regards copper as the most critical of the large-tonnage metals, but industry observers aren't so sure. Government scare talk on copper has certainly boosted ordering unreasonably. For a fine analysis of the copper outlook, see Simon Strauss' views on p. 3. It isn't likely that copper will be exactly plentiful for a long time to come, but it is likely that supply and demand will be more in balance by the end of 1952.

CANADIAN ALUMINUM expansion takes shape with progress on the vast Kitimat project of Aluminium, Ltd. Based on capacity increase from 200 to 500 tons of alumina per day from the company's Jamaica mines, the British Columbian project will get under way in early 1954. Its initial capacity will be 90,000 tons of aluminum yearly; eventual capacity is about 550,000 tons. The cost of Kitimat's 800,000 hp. will be 1 to 2 mills per kwh., about half the cost for similar plants in the U.S.

FIRST MALAYAN TIN will arrive here sometime in March. The U.S. will get about 20,000 tons in 1952 under the deal, not enough to really alleviate the Symington shortage. Contract negotiations are about to begin with Indonesian producers.

New Process Turns Mica Flakes into Insulation

Mica consumers in the United States may be freed from dependence on foreign sources by a development that permits the utilization of domestic sources of mica for a variety of electric insulating applications, it was forecast by Robert L. Gibson, general manager of the chemical division of the General Electric Co. Heretofore, he said, imports of mica from India accounted for most of the mica used by the electrical industry.

Key to the development is a special process by which minute mica flakes are so treated that a force is generated which holds the tiny particles together, Mr. Gibson stated. The resulting product is in the form of a continuous sheet produced in thicknesses ranging from two-thousandths to six-thousandths of an inch that has better dielectric strength than present machine- and hand-laid mica products. Greater uniformity of thickness and the absence of voids accounts for its improved properties.

Referred to as G-E micamat, the new product is presently being produced in a pilot plant in the laboratory of G.E.'s transformer and allied products division. Commercial production is planned for the first quarter of 1952, when a commercial-size machine will be in operation in Coshocton, Ohio.

Production of G-E micamat may necessitate the reactivating of mica mines in the United States, it was forecast by Mr. Gibson, and it is possible that as production of micamat expands, cost savings will result.

The utilization of domestic mica supplies promises help in alleviating a serious threat to the electrical industry due to the uncertainty of imports from abroad. Mica is a strategic material.

Capable of being impregnated with resins and bonded to paper, glass, and cloth for greater strength and improved electrical properties micamat tapes and sheets can be used in heating devices, molded into shapes for motors and generators, or machine-wrapped on bars and cable. New laminates and tubing, constructed with micamat, having outstanding insulation resistance, are foreseen in the near future.

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Metallic Compounds

ARSENIOUS OXIDE (arsenic trioxide), refined, white, minimum 99 percent — Per lb., 6¼c., in barrels carload lots delivered.

COBALT OXIDE — Ceramic grade 72¼ to 73¼% Co, $1.82 per lb. east of Mississippi, and $1.84¼ per lb. west of Mississippi. Quotations are for oxide packed in 350-lb. containers.

COPPER SULPHATE — Per lb., in carload lots, 8.95@9.95c., large or small crystals, f.o.b. N.Y.

Iron, Steel, and Coke

IRON—Per gross ton, Valley furnaces: Bessemer, $53; basic, $52, and No. 2 foundry, $52.50.

STEEL — Per net ton, f.o.b. mill, Pittsburgh, billets and slabs, $56. Bars, per 100 lb., $3.70; plates and structural shapes, $3.65.

COKE—Per ton, Connellsville furnace, $14.50@$15; foundry, $17@$18.

STEEL SCRAP — Per gross ton, delivered Pittsburgh, No. 1 heavy $46.00; No. 2 heavy $44.00, Cleveland, No. 1 heavy $45.00; No. 2 heavy $43.00.

Refractories

CHROME BRICK — Per ton, f.o.b. shipping point: Chemically bonded $77@$82; burned, $73@$78.

FIRECLAY BRICK — Per M., super quality, $116.60, Missouri, Kentucky, Pennsylvania; high heat quality, $99.60. Ohio, intermediate grade, $88; second quality, $79.20.

MAGNESITE — Brick, per ton f.o.b. works, 9-in. straights, $99@$102.

SILICA BRICK — Per M., Pennsylvania, $94.60; Alabama, $94.60; Illinois and Indiana, $104.50.

Average Metal Prices (E&MJ) for January, 1952

COPPER:	
Electrolytic, Domestic Refinery	24.200
Electroyltic, Export, Refinery	27.425
LEAD:	
Common, New York	19.000
Common, St. Louis	18.800
SILVER AND STERLING EXCHANGE:	
Silver, New York, per oz.	88.000
Silver, London, price per oz.	77.000
Sterling, Exchange, "Checks"	278.034
ZINC:	
Prime Western, East St. Louis	19.500
TIN:	
New York, Straits	109.404
New York, 99% min.	(e) 108.404
GOLD, per oz. U.S. price	$35.000
QUICKSILVER, per flask	$206.346
ANTIMONY, (E&MJ) (d)	53.350
ANTIMONY, bulk, Laredo	50.000
ANTIMONY, in cases, Laredo	50.500
PLATINUM, Refined, per oz.	$90.000
CADMIUM (a)	255.000
CADMIUM (b)	267.500
CADMIUM (c)	280.000
COBALT, 97%	240.000
ALUMINUM, 99% plus, ingot	19.000
MAGNESIUM, ingot	24.500
NICKEL (f)	56.500

Domestic quotations, unless otherwise stated, are in cents per pound. Sterling exchange, checks, in cents. Quicksilver, per flask of 76 lb.

(a) Cadmium average based on the producers' quotation. (b) Cadmium average based on the average of the producers' and platers' quotation. (c) Cadmium average based on platers' quotation. (d) Domestic, 5 tons or more but less than carload lot, packed in cases, f.o.b. New York. (e) Tin

E. & M. J. Weighted Index of Non-Ferrous Metal Prices

100 is composite for 1922-3-4. (Copper, Lead, Zinc, Tin, Silver, Nickel, Aluminum)

1940	79.22	1946	110.06
1941	83.49	1947	149.46
1942	86.80	1948	168.38
1943	88.74	1949	151.97
1944	88.74	1950	156.42
1945	90.86	1951	190.16

	1950	1951	1952
January	135.86	192.48	193.83
February	135.65	194.06	.....
March	132.60	190.19	.....
April	134.04	190.18	.....
May	142.02	189.47	.....
June	154.30	187.19	.....
July	156.40	186.46	.....
August	160.67	186.15	.....
September	172.56	186.15	.....
October	179.83	193.21	.....
November	186.00	193.17	.....
December	187.05	193.17	.....

Lead Average (Monterrey)

The net price realized by the American Smelting & Refining Co. on all of its sales of Mexican pig lead, including metal sold for consumption in Mexico, during the week ended Jan. 26, 1952, was 18.78c. (US) per pound, f.o.b. refinery, Monterrey, Mex.

DAILY PRICES OF METALS (E & M J QUOTATIONS)

Jan.-Feb.	Electrolytic Copper: Domestic Refinery	Electrolytic Copper: Export Refinery	Straits Tin, New York	Lead: New York	Lead: St. Louis	Zinc East St. Louis
31	24.200	27.425	121.500	19.000	18.800	19.500
1	24.200	27.425	121.500	19.000	18.800	19.500
2	No market	27.425	121.500	19.000	18.800	19.500
4	24.200	27.425	121.500	19.000	18.800	19.500
5	24.200	27.425	121.500	19.000	18.800	19.500
6	24.200	27.425	121.500	19.000	18.800	19.500
Average	24.200	27.425	121.500	19.000	18.800	19.500

Average prices for calendar week ended Feb. 2 are: Domestic copper f.o.b. refinery, 24.200 c.; export copper f.o.b. refinery 27.425c.; Straits tin, 121.500c.; New York lead, 19.000c.; St. Louis lead, 18.800c.; St. Louis zinc, 19.500c.; and silver, 88.000c.

The above quotations are our appraisal of the major United States markets, based on sales reported by producers and their agencies. They represent payments received by producers for the product. They are reduced to the basis of cash, New York or St. Louis, as noted. All prices are in cents per pound.

Copper, lead and zinc quotations are based on sales for both prompt and future deliveries; tin quotations are for prompt delivery only.

In the trade, domestic copper prices are quoted on a delivered basis; that is, delivered at consumers' plants. As delivery charges vary with the destination, the figures shown above are net prices at refineries on the Atlantic seaboard. Delivered prices in New England average 0.300c. per pound above refinery basis.

Our export quotation for copper reflects prices obtaining in the open market and is based on sales in the foreign market reduced to the f.o.b. refinery equivalent, Atlantic seaboard. On f.a.s. transactions we deduct 0.075c. for lighterage, etc., to arrive at the f.o.b. refinery quotation.

Quotations for copper are for ordinary forms of wirebars and ingot bars. Revised premiums on special shapes, effective in most instances on deliveries beginning Jan. 1, 1951, are: Standard ingots 0.125c. per pound; slabs, 0.375c. and up; cakes 0.425c. and up, depending on weight and dimensions; billets 1.35c. and up, depending on dimensions and quality. Discount on cathodes 0.125c. to 0.15c. per pound.

Quotations for zinc are for ordinary Prime Western brands. Premiums obtaining over Prime Western zinc in the East St. Louis market on the following grades, in cents per pound: Selected 0.10c.; Brass Special, 0.25c.; Intermediate, 0.5c. High Grade zinc sold on contract, delivered in the East and Middle West, commands a premium of 1.35c. per pound over the East St. Louis basis for Prime Western; on Special High Grade the premium or differential is 1.50c. per pound, effective Jan. 1, 1951.

Quotations for lead are for the common grade, and are based on sales of domestically refined metal sold to domestic consumers. The differential on sales in the Chicago district is 10 points under New York; for New England add 7½ points to the New York basis. Corroding grade commands a premium over common lead of 10 points.

Silver, Gold, and Sterling Exchange

Jan.-Feb.	Sterling Exchange "Checks"	Silver New York	Silver London	Gold London
31	$2.78⅛	88.000	77d	248s
1	2.78⅛	88.000	77d	248s
2		Not Quoted		
4	2.78⅛	88.000	77d	248s
7	2.78⅛	88.000	77d	248s
6	2.78⅛	88.000	77d	248s

Average silver, 88.000c.; Sterling Exchange 278.125c.

The daily New York silver quotation reported by Handy & Harman is for silver contained in ores and other unrefined silver bearing materials, in cents and fractions of a cent per troy ounce. It is determined by Handy & Harman on the basis of actual sales of bar silver .999 fine in amounts of 50,000 ounces or more for nearby delivery at New York as reported daily by regular suppliers, and is usually one-quarter cent below the price paid for such bar silver, this reduction being allowance to such suppliers for carrying, delivering, and marketing. In addition to foreign silver, the quotation also applies to domestic silver if such silver enters the New York market.

The Treasury's purchase price of newly mined domestic silver was established at 90.5c. per troy ounce, 1000 fine, effective on July 1, 1946 under an amendment to the Silver Purchase Act of July 6, 1939.

London silver quotations are in pence per troy ounce, basis .999 fine.

London gold quotations are per troy ounce, basis 1000 fine.

Sterling quotations represent the demand market in the forenoon.

United States Gold Price

The price paid by the United States Treasury for gold purchased by the mints continued at $35 per troy ounce of fine gold, less ¼ of 1 percent.

Actual payment by the United States Treasury for gold in imported and domestic ore or concentrate is at 99.75 percent of the price quoted by the Treasury, which at present is equal to $34.9125 per ounce.

London Tin

Standard tin on the London Metal Exchange, first session, per long ton:

	Standard Tin Spot	Standard Tin 3-Mo.
Jan. 31	987½	986
Feb. 1	992½	990
Feb. 4	997½	997½
Feb. 5	1,002½	1,002½
Feb. 6	No Market	

Tin, 99%

Quotations on 99% tin (tin content), New York, were nominally as follows:

Jan. 31, $1.20½; Feb. 1, $1.20½; 2, $1.20½; 4, $1.20½; 5, $1.20½; 6, $1.20½.

Foreign Exchange

Foreign exchange rates on the Mexican peso and the Canadian dollar:

Mexico (silver peso) ..... 11.58c.
Canada (dollar) (a) ..... 99⅛c.

(a) Selling basis, N.Y.

Official London Prices

The following delivered quotations have been fixed by the British Ministry of Metals for the United Kingdom:

	Per Long Ton £	s.	d.
Copper:			
Electrolytic, high conductivity	227	0	0
Fire refined, high conductivity	227	0	0
Fire refined, high grade	226	10	0
Fire refined, min. 99.7 percent	226	0	0
Fire refined, min. 99.2 percent	225	10	0
Lead:			
Soft, foreign duty paid	170	0	0
Soft, Empire	170	0	0
English, refined	171	10	0
Zinc:			
Foreign (G.o.b.) duty paid	190	0	0
Domestic (G.o.b.)	190	0	0
Prime Western and deleaded	190	0	0
Refined and electrolytic	194	0	0
Minimum 99.99 percent	196	0	0

"Free" Gold Steady

The market for "free" gold was quiet in January. Prices realized in the Far East were moderately higher. In Paris the tendency was easier.

The following prices for "free" gold, per fine oz., were compiled by Pick's World Currency Report:

	Bars (12.5 kg.) Dec. 31 1951	Jan. 31 1952
New York, transit	$39.00	$38.75
Manila	39.83	41.75
Hong Kong	42.00	42.75
Bombay	48.00	49.50
Tangier	39.00	38.85
Beyrouth	38.83	39.00
Paris	41.63	40.75
Buenos Aires	43.00	43.25

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Aluminum Association Elects

A. P. Cochran, Cochran Foil Co., Louisville, Ky., has been re-elected president of the Aluminum Association. Arthur V. Davis continues as chairman of the board. Vice presidents are: I. T. Bennett, Revere Copper and Brass, Baltimore; L. M. Brile, Fairmont Aluminum Co., Fairmont, W. Va.; and E. G. Fahlman, The Permold Co., Medina, Ohio. Donald M. White has been re-appointed secretary-treasurer.

Directors elected for three-year terms: Frank B. Cuff, Aluminum Company of America; R. G. Farrell, Fairmont Aluminum Co.; and W. A. Singer, Apex Smelting Co.

•

Record Sulphur Output

Production of native sulphur in the United States in 1951 totaled 5,278,240 long tons, 2% more than in 1950 and the highest on record. Output exceeded 400,000 tons in every month, reaching the highest levels during the third quarter in which the monthly average was 456,523 tons, the Bureau of Mines reports.

Over a period of years prior to 1951, producers' stocks of sulphur declined continuously as sales exceeded production. By 1951 stocks were so low that this practice could no longer be continued. Less sulphur was shipped from the mines in 1951 than in the preceding year. Similarly, apparent sales in 1951 of 5,095,347 tons were 10% below 1950.

Producers' stocks of sulphur at the end of 1951 totaled 2,837,432 tons, which compares with 2,654,530 tons on hand at the beginning of the year.

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Aluminum Output Rising

The supply of aluminum in 1951 fell far short of the demand even though the production of primary aluminum increased throughout the year and the recovery of aluminum from scrap was 26,000 tons more than in 1950, according to the Bureau of Mines.

Domestic production of primary aluminum in 1951 was approximately 836,881 short tons. This was an increase of 16% over 1950 but fell short of the production expected at the start of the year by about 7,000 tons. Increased production was accomplished in each succeeding quarter.

Two strikes, one at Reynolds' Listerhill plant in May, and a second at Reynolds' Troutdale plant in December, caused production losses estimated at 8,200 tons. Other losses occurred as a result of a power interruption in the Pacific Northwest during the low water period in September. Full power was returned to the Pacific Northwest reduction plants on October 1, but capacity producion was not attained until November.

The domestic production of secondary aluminum was about 270,000 tons in 1951, an increase of 11% over the 1950 production. Recovery from old scrap declined in 1951. During the first half of 1951 secondary production was maintained at a rate of more than 300,000 tons per year.

Foreign trade in aluminum, both exports and imports, decreased in 1951. Imports of pig and ingot were about 123,000 tons, a decrease of 30% from 1950. Imports from Canada accounted for 86% of the total. In November, the United States entered into a trade agreement with the United Kingdom which provided for 11,000 tons of Canadian aluminum to be diverted from the United Kingdom to the United States. Deliveries were to be made at the rate of 2,200 tons per month starting in December.

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Rhodesia's Copper Production

Production of crude copper in Rhodesia in 1951 totaled 349,667 tons, which compares with 314,589 tons in 1950.

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Chile's Copper Output

During October the production of copper in Chile totaled 40,177 tons, which compares with 35,177 tons in September, the American Bureau of Metal Statistics reports. Production in 1950 averaged 31,733 tons a month.

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Tri-State Concentrates

Joplin, Mo., Feb. 2, 1952

	Per Ton
Blende	
Prime coarse (jig and table 60% zinc)	$135.00
Flotation, 60% zinc	$135.00
Galena	
Coarse and flotation, 80% lead	$245.95

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Brass and Bronze Ingot

85-5-5-5 (No. 115) 27½c.; 80-10-10 (No. 305) 33c.; 88-10-2 (No. 215) 40c. Yellow, 23½c. and upward.

Ferro Alloys at Marietta

Four electric furnaces are in operation in the new ferro-alloy plant of Electro Metallurgical Co. in Marietta, Ohio. Furnaces are being added at the rate of one a month until all 24 called for in the plans have been installed. When completed, the plant will be the largest of its type in the world.

Ferrochrome will be one of the major products. A grade of ferrochrome with a lower carbon content than has been possible heretofore will be in production about the middle of this year.

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Secondary Aluminum

Ceiling delivered prices of secondary aluminum ingot, per pound, in lots of 10,000 lb. or more:

Piston alloy, 20½c.; No. 12 alloy, 19½c.; No. 13 alloy, max. .30 copper, 21c.

Deoxidizing grade: No. 1, 18.80c.; No. 2, 18.60c.; No. 3, 18.40c.; No. 4, 18.20.

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Smelters' Copper Scrap Prices

Custom smelters' buying prices for scrap, carload lots, refinery:

No. 1 heavy copper and wire, 19½c.; No. 2 heavy copper and wire, 17⅞c.; Light copper, 16½c.; refinery brass, 17½c.

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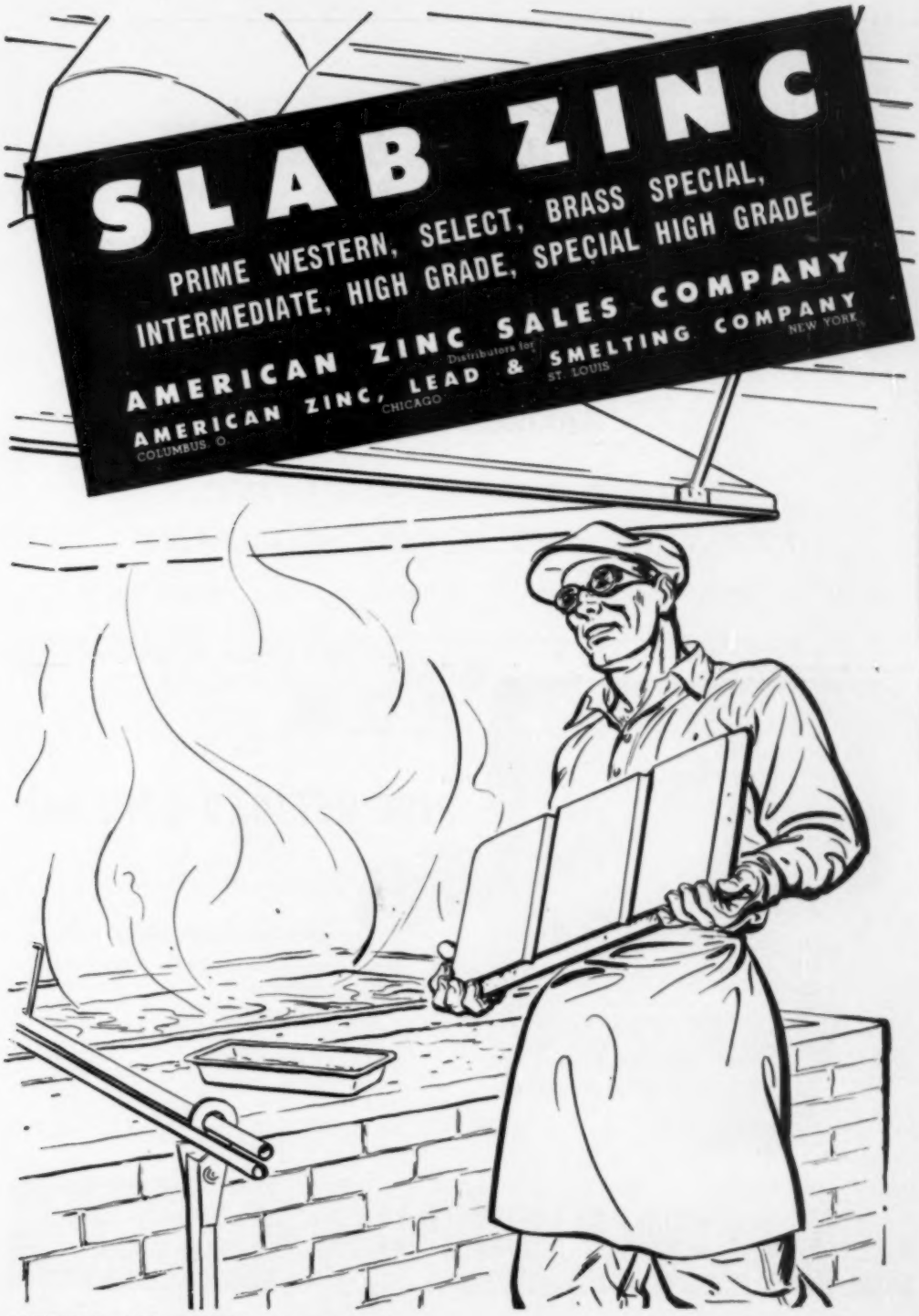
Dealers' Scrap Prices

Dealers' buying prices, f.o.b. New York or equivalent freight points, for wholesale quantities, in cents per lb.

No. 1 copper wire	18⅞@19½
Heavy copper & wire, mixed	17½@17⅞
Light copper	16@16½
No. 1 composition	18½@18½
Composition turnings	17½@17⅞
Cocks and faucets	16½@16½
Light brass	9½@10
Yellow brass turnings, mix.	13½@14
Heavy yellow brass, mixed	13⅞@14½
Auto radiators, unsweated	14½@15
Brass pipe, cut	16@16½
Rod brass turnings, No. 1	15@15½
Rod ends, brass	15½@16
New soft brass clips	17½@18
Cast aluminum, mixed	7½@8
Aluminum pistons, clean	7½@8
Aluminum crankcases	7⅞@8
Aluminum clips, new soft	10½
Sheet aluminum, old clean	8
Duralumin clips, new	8
Aluminum turnings, clean	5
Zinc die cast, mixed	6½@7
Zinc die cast, new	8⅞@9½
Old zinc	10@10½
New zinc clips	13½@13½
Soft or hard lead	15½@16
Battery plates	9⅞@10½
Babbitt mixed	17@17½
Linotype or stereotype	17½@18
Electrotype	16@16½
Solder joints close cut	20@22
Block tin pipe	1.05@1.10
No. 1 pewter	75@80
Autobearing babbitt	60@62
Monel clips, new	28@30
Monel sheet, clean	28@30
Monel turnings	25@27
Nickel clips, new	35@38
Nickel anodes, cast	35@38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Arsenic	.0005
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Lead	.0001
Selenium & Tellurium (combined)	.0068

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